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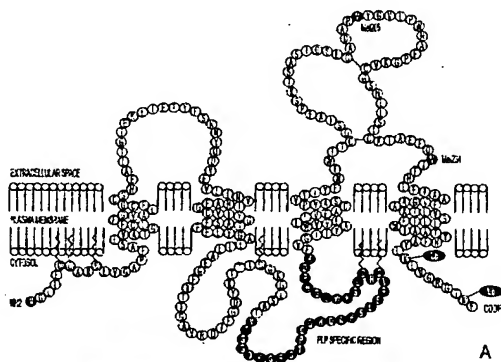
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(54) Title: BIOACTIVE PEPTIDES AND UNIQUE IRES ELEMENTS FROM MYELIN PROTEOLIPID PROTEIN PLP/DM20



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(57) Abstract: Three novel low molecular weight (LMW) polypeptide fragments of a proteolipid protein human PLP/DM20 are designated PIRP-M, PIRP-L and PIRP-J, and are growth factors for oligodendrocytes with anti-apoptotic activity. They are encoded by mRNA from an IRES. Fusion polypeptides of such a LMW polypeptide, DNA encoding the LMW polypeptide and fusion polypeptide, expression vectors comprising such DNA, and cells expressing such polypeptides, or pharmaceutical compositions thereof, are useful for stimulating neural stem cell differentiation, maturation along the oligodendrocytic pathway and proliferation of oligodendrocytes or precursors. These compositions can protect oligodendrocytes (and nonneural cells) from apoptotic death. Thus, the present composition is used to treat a disease or condition in which such differentiation, maturation and proliferation or inhibition of cell death, including remyelination or stimulation of oligodendroglia or Schwann cells, is desirable. Disorders include multiple sclerosis, trauma with Parkinson's-like symptoms, hypoxic ischermia and spinal cord trauma.

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